DOCUMENT RESUME

ED 069 443 RC 006 554

TITLE	Medical Care for Small Communities.
INSTITUTION	Governor's Committee on Community Health Assistance, Raleigh, N. C.
SPONS AGENCY	North Carolina State Dept. of Administration, Raleigh.
PUB DATE	Jul 72
NOTE	49p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Community Involvement; Health Programs; Information Networks; Labor Supply; *Manpower Needs; *Medical Services; Organizational Climate; *Physicians; Recruitment; *Reports; *Rural Areas
IDENTIFIERS	*North Carolina

ABSTRACT

Technological, social, economic, and political changes have increased the rapidity of changes in the pattern of living in small towns and rural areas. As a result, a large percentage of rural Americans who live at or below the poverty level are not provided adequate medical care. After realizing the shortage of physicians in North Carolina and after focusing its attention on the problems of small communities and communities with acute health manpower shortages, the state suggested that existing resources be more effectively utilized and that advice on how to develop appropriate kinds of health care mechanisms be provided. This booklet, then, provides a background for communities involved in planning for improved health care delivery, which involves organizing at the community level, identifying community health needs and resources, and defining the planning area. Changing concepts in rural health care and alternative types of rural health care delivery are discussed under the heading of Innovations in Rural Health Care. Some basic guidelines in recruiting a physician are provided, such as what conditions influence the physician's choice of a practice setting, how a community can generate physician interest, and what the community can do to keep the new physician. Appendixes and a selected bibliography are included. (HBC)

ED 069443

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

Medical Care for Small Communities

Governor's Committee
on
Community Health Assistance

OFFICE OF COMPREHENSIVE HEALTH PLANNING
DIVISION OF STATE PLANNING
DEPARTMENT OF ADMINISTRATION
STATE OF NORTH CAROLINA
116 W. Jones Street, Raleigh, N.C.
July, 1972

RC006554

FOREWORD

There is growing concern over the many problems that rural North Carolina faces in obtaining adequate medical care. Citizens, state government, and the medical community have become increasingly involved in the search for solutions. Some communities have developed health delivery systems whereby medical care, limited in scope though it might be, has been secured. North Carolina maintains its own medical school and provides supplementary funds for two private medical schools. The State is committed to increasing the number and quality of medical doctors, supporting new programs such as the residency in family practice, and providing loans to medical students in return for agreed-upon practice in rural communities. The Medical Society of the State of North Carolina operates a physician placement service for physicians and communities, encourages the immigration of out-of-state doctors, and generally supports the utilization of new types of health professionals.

Governor Robert W. Scott's concern over the growing problem of physician shortage in rural areas led to his appointment of a special Committee on Community Health Assistance. To some extent the idea for this Committee began with the work of a special task force of the Governor's Advisory Council on Comprehensive Health Planning which devoted months of study to problems related to the availability of basic health care services. The study recognized that although our medical schools are graduating an increasing number of physicians, it will be many years before the total number of practicing physicians is substantially increased. The task force was aware that producing more physicians would not necessarily mean a better distribution of services. The report stressed that more efficient use had to be made of existing resources, and that communities could seek solutions to their health care delivery problems if provided with advice on how to develop appropriate kinds of health care mechanisms. Therefore, the task force recommended the organization of a small body of health experts at the state level to study the problems of small communities, and to provide assistance to communities with acute health manpower shortages. Subsequently, Governor Scott appointed ten health professionals to focus on the problems of rural health care delivery (See Appendix for membership of Governor's Committee on Community Health Assistance).

The Committee on Community Health Assistance is a planning and consultation resource to communities with health care delivery problems. A longer range objective is to plan for and propose forms of state assistance to meet the health needs that are identified during the process of Committee consultation with communities. Such recommendations may be referred to the General Assembly, or other appropriate body, for action.

Hopefully this booklet will stimulate action at the community level and provide background for communities involved in planning for improved health care delivery.

CONTENTS

FOREWORD III

PART I
INTRODUCTION

CHANGING PATTERNS IN RURAL LIFE 3
CRISIS IN HEALTH CARE DELIVERY 3
Physician Shortage 3
Geographic Maldistribution 4
Specialty Maldistribution 4
Other Health Resource Shortages 5

PART II
PLANNING FOR IMPROVED HEALTH CARE DELIVERY

INTRODUCTION 9
ORGANIZING AT THE COMMUNITY LEVEL 9
IDENTIFYING COMMUNITY HEALTH NEEDS AND RESOURCES 10
DEFINING THE PLANNING AREA 11

PART III
INNOVATIONS IN RURAL HEALTH CARE

INTRODUCTION 15
CHANGING CONCEPTS IN RURAL HEALTH CARE 15
Improved Transportation 15
Communication Links 16
The Health Team Approach 16
ALTERNATIVE TYPES OF RURAL HEALTH CARE DELIVERY 17
The Physician in New Organizational Settings 17
Bringing On-Site Physician Services to Shortage Areas 19
Physician-Directed Satellite Services 21

PART IV
RECRUITING A PHYSICIAN—SOME BASIC GUIDELINES

INTRODUCTION 27
THE PHYSICIAN'S CHOICE OF A PRACTICE SETTING 27
GENERATING PHYSICIAN INTEREST IN THE COMMUNITY 28
Developing a Brochure 28
Contacting Appropriate Resources 30
KEEPING THE NEW PHYSICIAN 32

APPENDICES

Appendix A: Membership of the Committee on Community Health Assistance 37
Appendix B: Emergency Medical Services 39
Appendix C: Selected Data Sources for Developing a Brochure 40
Appendix D: Suggested Contacts for Assistance with Physician Recruitment 42
Appendix E: Approved Graduate Training Programs in Family Practice 44
Appendix F: Selected Bibliography 52

Part I

Introduction

CHANGING PATTERNS IN RURAL LIFE

The pattern of living in small towns and rural areas has changed rapidly in the past few decades. These changes—technological, social, economic, and political—have created many problems that thus far have defied complete solution. One such problem, the provision of adequate health care, is of increasing concern to both consumers and providers of health services.

The rapid urbanization of our society has strongly influenced both small town and open countryside. A steadily declining proportion of families lives in rural areas. In 1970 approximately 27% of the total U.S. population lived in rural areas, while in 1950, 36% of the population was classified as rural. This tremendous shift to urban areas is expected to continue at an accelerated rate.

Although there are many high and middle income families living in rural areas, a large percentage of rural Americans live at or below the poverty level. The relationship of this fact to adequate health care is extremely important. Most of the major causes of morbidity and mortality in the United States have incidence rates that are much higher among low income families than high income families. Ill health leads to loss of income, and loss of income often makes it impossible to secure adequate medical care. Complicating the situation is the fact that doctors tend to gravitate to higher income areas, leaving economically depressed communities without medical care.

The decline in rural and small town populations undermines the economy and severely restricts the fiscal base upon which local government and business must rely to provide needed services and products. As services are curtailed or terminated and products become less available, residents are forced into a growing dependence on larger neighboring communities.

Because rural residents must travel beyond their immediate community for many services and products, they are beginning to recognize the interdependence of the various communities within their area. This has led to interaction on the basis of larger geographical units. The trend toward larger units of action—fewer but larger farms, multi-district school systems, areawide fire and police protection, and regional hospitals—allows resources to be combined into larger and more functional groupings. County, state, and federal governments are increasingly in agreement that services—including health services—can be provided more effectively on a regional basis.

CRISIS IN HEALTH CARE DELIVERY

PHYSICIAN SHORTAGE

Although the nation's medical schools have been graduating a constantly increasing number of doctors, many health experts contend that the shortage of physicians continues to grow. These people note that the number of doctors engaged in teaching, research, and administration has

risen, causing a decline in the ratio of doctors who actually provide personal health services.

The magnitude of the physician shortage, however, is the subject of considerable debate. While some stress the need to produce additional physicians, others maintain that a physician shortage does not exist, or at least is not as acute as commonly assumed. It has been submitted that the main problem with regard to shortages of physician services is the present geographic and speciality maldistribution of physicians.

GEOGRAPHIC MALDISTRIBUTION

Metropolitan areas have a disproportionately large share of medical doctors. The six largest counties in North Carolina, with 26% of the state's population, have 43% of the physicians. Seven cities—Raleigh, Durham, Chapel Hill, Greensboro, Winston-Salem, Charlotte and Asheville—with 30% of the state's population have about 50% of the physicians. Similar situations across the country led the American Medical Association's Council on Rural Health to note that people in rural America have "only about one half the access to physicians, dentists, nurses, hospital beds and other health resources when compared with the rest of the nation."

It is significant that about 22% of all the doctors who practice in rural North Carolina are over 70 years of age. As they retire, become disabled or die, these doctors are not usually replaced. Thus a redistribution of physicians occurs when younger doctors entering practice decide to locate in larger cities rather than replace these older doctors in rural areas.

This maldistribution of physicians, which has developed over the past several decades, has occurred because better hospitals and supporting facilities, educational, social and recreational advantages are often found in urban areas. Physicians, like many other people, enjoy the amenities, real or imagined, of urban living.

SPECIALTY MALDISTRIBUTION

The growth of medical specialization has resulted in a decline in the number of family physicians and a shift away from rural practice. In 1950 only 36% of the doctors in the United States limited their practice to a specialty, while in 1965, 64% were classified as specialists. While specialization has produced great medical advances, it has also intensified the problems that rural areas already faced in attracting doctors.

An important factor in the medical student's inclination toward specialization is his lack of exposure or orientation to family practice during his training. Many students feel that specialization offers more glamor, more opportunity to keep abreast of medical advances, a greater feeling of pride and respect, a more controlled work schedule and greater monetary reward. Many rural areas and small communities lack the population base and facilities for a profitable specialty practice.

In the past few years, however, there has been a growing interest among medical students in the inequities in the present health care delivery system. Many medical schools are responding by establishing training

programs in family practice. These programs, which emphasize the delivery of family-oriented primary health care, are attracting an increasing number of students. Family practice residencies may encourage more physicians to practice in rural areas, although it remains to be seen what impact such programs will have upon physician distribution.

OTHER HEALTH RESOURCE SHORTAGES

Rural areas also face problems in regard to other types of health care resources. As physicians continue to gravitate to urban practice, many allied health professionals such as nurses and technicians, either follow or find other employment. The pharmacist may close his business when the local doctor moves, retires, or dies. The community that is unable to attract or support a physician is often without dental care also.

Rural hospitals are feeling the pinch. Although the number of patients and the demand for services is increasing, many rural hospitals are being forced to reduce their staffs. Many of these hospitals have limited laboratory, diagnostic and specialty service facilities.

Emergency care, probably the weakest link in the delivery of health services, is often completely inadequate in rural areas. Emergency vehicles may be staffed by poorly trained personnel and outfitted with out-of-date equipment. The communication system may be insufficient to assure prompt response to emergencies, and the local hospital may be unable to handle emergencies quickly and efficiently (See Appendix for description of emergency medical services components).

Part II

Planning for Improved Health Care Delivery

6/7

INTRODUCTION

Limitations on health resources are most acute in rural areas. The readiness and ability of rural communities to respond to problems of health manpower, facilities and services depends greatly on local health planning. Such planning must focus on the development of new patterns of health care delivery which will attract physicians to rural practice.

Before planning efforts proceed, however, one basic consideration must be accepted as influencing the design of any health system: most physicians desire to practice in close proximity to one another and prefer locations offering access to adequate backup, particularly in terms of specialized diagnostic and treatment services.

ORGANIZING AT THE COMMUNITY LEVEL

A successful health program must reflect the needs, interests and efforts of the residents in the community to be served. Planning will be ineffective without community support. In some communities it will be necessary to generate public support for planning, while in other communities concern over various health problems may already exist.

Although the support and cooperation of all segments of the community is required in health planning, this interest must be properly channeled. A community health council or committee can develop leadership and direction. In order to secure participation, broad support must be built in the area for the committee. Persons not on the committee should be encouraged to participate by serving on subcommittees and study groups. These subcommittees could consider specific problems such as finances, facilities and manpower for improved health care delivery.

Acceptance and support for any plan for health care delivery will depend on the degree to which the public is involved in the development of the plan. In forming the local health planning committee, every effort should be made to involve a broad and representative cross section of the community.

Although the makeup of the committee will vary from community to community, it should include in its membership both health service providers and consumers.

The committee should consider contacting:

—Practicing physicians in the vicinity. Support of local doctors is most important, for their attitudes will influence a new doctor in his decision to locate in the community.

—Other health service providers, such as dentists, nurses and pharmacists.

—Representatives of health institutions, public health and social service agencies, and areawide comprehensive health planning agencies.

—Influential individuals in the community. These should be leaders in

industry and business, nonhealth professionals, religious and education leaders, and local government officials.

—Residents of the medical trade area. Representation from this group should include persons of various educational and income levels, ethnic and age groups.

The health committee's basic functions could include:

—Determining goals and objectives, as these relate to improved health care delivery.

—Supervising and coordinating health planning activities, and making decisions based upon recommendations and alternate courses of action.

—Selecting consultants, if needed, to advise the committee.

—Implementing health plans by influencing necessary political action and securing financial assistance.

—Maintaining liaison with other organizations and agencies with mutual concerns, and coordinating activities with those of the overall community planning efforts.

—Informing the community of the committee's activities.

IDENTIFYING COMMUNITY HEALTH NEEDS AND RESOURCES

One of the health committee's first tasks will be to assess the community's health needs and resources. Health needs include not only the disease and illness problems of individuals, but also such concerns as manpower shortages, inadequate facilities and lack of coordination among health care providers. The committee should consider both present and anticipated health needs.

The committee should first assess the existing patterns of health care delivery, relying on the experience of both health providers and consumers. Easy access to services and the ability to pay encourages people to use such services. The committee should consider not only which services are available but also any barriers, financial or otherwise, which discourage utilization of these services.

The committee must compare what is known about the existing health system in the community with what might be a desirable or ideal system. Again, the committee should solicit the opinions of providers and consumers to determine an ideal pattern of health care delivery.

Criteria to be considered in determining the ideal system include:

—Effective and economical utilization of health professionals.

—Adequate facilities in the medical service area to provide needed services.

—Satisfactory funding to assure that all persons in the community will be served.

In addition to soliciting the opinions of providers and consumers, other information should be obtained. This could include:

—The number, types and distribution of health manpower and facilities.

—Nature of the population—age, sex, racial composition.

—Existing patterns of coordination among various health agencies in the community. Number and types of agency referrals should be taken into account, as this might give some indication of interagency coordination.

—Results of any special screening programs that have been conducted in the community. These would show the prevalence of certain disease and illness conditions in the area and indicate whether the existing community health system can provide needed services.

To supplement the above, the committee may wish to undertake a special health interview survey. This could be quite costly, however, and careful consideration should be given to the question of whether or not the expected benefits will justify the costs involved.

It is the committee's job to determine how well the existing system is meeting the needs of both consumers and providers of health services, and to identify problems in the system such as under-utilization of services and/or lack of needed resources. The ultimate goal will be to develop the type of delivery system that will best serve the consumer and offer greater incentives for physicians and other health provider groups.

DEFINING THE PLANNING AREA

Because rural areas must make the most of scarce resources, it may be productive for the committee to relate its planning efforts to neighboring communities. Dependent solely on limited local resources, many small communities will find it difficult, if not impossible, to obtain needed health resources. To attempt to provide a full range of health services in every community would be unrealistic in view of the costly duplication of services which might result. Cooperative planning is usually essential to develop the types of innovations in the health delivery system that will attract additional physicians and other health resources, and to provide for increased accessibility to services.

Broader-based planning:

—Facilitates development of a full range of needed facilities such as hospitals, extended care facilities and nursing homes.

—Creates more effective patterns for the organization and delivery of health services.

—Allows more effective utilization of facilities, physicians and allied health personnel.

—Facilitates patient referrals and assures greater ease of access to particular components of the health care system.

—Increases the possibility of sound financing and adequate funding.

—Allows the physician greater opportunity for consultative and diagnostic assistance, and time for continuing education.

—Aids in recruitment of health personnel by offering employment within an ongoing, innovative delivery system.

Planning on an enlarged geographic base demands coordination and cooperation among neighboring communities, hospitals, physicians and other health resources. Consolidating and sharing services and manpower in multi-community or regional health care systems requires working relationships among the various health facilities and programs in the area.

While regionalization of health care services can be important for improving access to services in rural areas, so too can the related idea of "growth center" planning. Growth centers, which are communities with potential for development, can serve as focal points for primary physician and other health services.

In North Carolina, growth center planning is gaining increased acceptance and communities should keep informed of these developments. Growth center relationships within a region can affect the design of appropriate kinds of health service networks. Communities designated as growth centers will plan for health services as well as industrial expansion, job development and training, and other aspects of rural development. This could result in the type of community development that will produce attractive rural settings for physicians and other health manpower. The small rural community having less potential for development can benefit by affiliating with a nearby growth center in efforts to obtain additional physician services.

Part III

Innovations in Rural Health Care

INTRODUCTION

It appears that physicians will continue to gravitate to urban practice, leaving large areas with limited access to health care. Consequently, rural areas have become a vast laboratory for experiments in new approaches to health services delivery. University medical centers are rotatting students, interns and residents though rural health centers and satellite clinics. The federal government, through agencies such as Comprehensive Health Planning, Regional Medical Program and Office of Economic Opportunity, is sponsoring numerous innovative health care projects. Rural residents themselves are taking a greater interest in health care, and are organizing to develop community health plans to provide needed local health services.

There is no single structure for the study and solution of all health problems that would apply to all communities in all situations. Each community must analyze its problems to determine the most feasible arrangement for the delivery of health care. The range and complexity of services in a rural area depends upon:

—The degree to which residents recognize and understand the need for better health services.

—The level of resources available and committed to the designing of an improved health care delivery system.

—The size of the geographic region within which planning occurs.

—The relationships which are established with health delivery mechanisms outside the planning area.

CHANGING CONCEPTS IN RURAL HEALTH CARE

Several factors have enabled the development of new concepts in the delivery of health services:

—Improvements in transportation.

—Advanced communications and diagnostic technology.

—Development of new categories of health professionals as part of an enlarged health team.

IMPROVED TRANSPORTATION

Today's modern transportation makes it unnecessary for medical services to be located in every town or hamlet. Because travel time, not distance, is the important factor, it is possible to think in terms of a facility, such as a rural health center, conveniently located to serve an area much larger than an individual town.

Cars, buses, vans and even helicopters, can be utilized to bring patients and health personnel to centrally located health services. In devel-

oping a transportation system, it may be possible to improve and integrate existing services rather than develop completely new ones. Arrangement might be made with local morticians, taxi owners, police and fire departments to provide transportation to a health facility. The use of school buses, which are idle most of the time, might be considered. A community, or group of communities, might establish a transportation cooperative, using local funds or funds from outside sources to buy or rent vehicles.

COMMUNICATION LINKS

Advances in communication technology have enabled the establishment of important links between various health care providers, and have stimulated experimentation with rural health care delivery systems. Such links can provide the vehicle by which backup services are provided health personnel who work in rural areas. In some cases the communications system may involve nothing more than a telephone, whereby a physician's assistant or nurse practitioner manning an outpost clinic can consult with a physician. In other instances a rural health center may utilize more sophisticated equipment such as closed circuit television, computers, and microwave radio.

Communications systems can have important implications for patient care. A patient's vital signs, for example, can be recorded by a medical technician staffing a rural health center and transmitted over special telephone lines to a physician some miles away for interpretation. The results can be returned almost immediately to the rural health center.

Electronic equipment also can serve an educational or teaching function for health personnel in rural areas and small communities. For example, lectures prepared at a university medical center can be beamed over a two-way radiotelephone complex to the rural health center, the community hospital or the individual practitioner participating in a rural health program.

Some types of electronic equipment can narrow the mileage and knowledge gap between the rural practitioner in solo practice and the big city specialist. Various experiments have transformed some doctors' offices into computerized laboratories with communication systems that link the doctor with the more extensive resources of a large hospital or medical school. However, few small towns and their physicians could install or maintain such a system because of the great expense, the experimental nature of such a setup and the extensive cooperation needed from individuals and institutions outside the area.

THE HEALTH TEAM APPROACH

There is a growing interest in the training and effective utilization of health professionals who provide services supportive to the physician. The health team concept is not new, only the size of the team is being enlarged. The traditional physician-nurse arrangement has been augmented by the addition of other health personnel, such as the physician's assistant and nurse practitioner, who are assuming many of the tasks

formerly performed by the physician. Joining these new categories of health workers are existing health professionals (public health nurses, health educators, technicians, etc.) and health-related personnel (social workers, home economists, etc.) to form a health team which, headed by the physician, provides comprehensive, family-oriented health care.

ALTERNATIVE TYPES OF RURAL HEALTH CARE DELIVERY

Innovative experiments taking advantage of improved technology and organizational techniques give vivid testimony to the fact that services can be extended to areas lacking adequate levels of health and related resources. These experiments in rural health care delivery are based on many different kinds of models. For purposes of discussion these models have been categorized in a generic sense.

The following examples of alternative arrangements for rural health services are based on the premise that the provision of physician services is the key element in any health care delivery system. Following a general discussion of each category, several programs are highlighted as illustrative of that category.

THE PHYSICIAN IN NEW ORGANIZATIONAL SETTINGS

In some locations physicians may be available, but not in sufficient numbers to serve all those in need of medical care. Focusing on this type of situation, some experimental programs stress the need to change traditional modes of medical practice. Emphasis is upon increasing the physician's efficiency, thus placing him in a better position to utilize his time and talents in caring for those who most need his help. One way to accomplish this is to establish a system by which the physician utilizes a team of auxiliary personnel who relieve him of many routine responsibilities, and provide specialized social and health related services. Under this system, the physician can see a patient when he first enters the system to establish that care is physician-directed and to explain the role of other team providers. Much of the burden on the physician for total patient care is relieved with the delegation of many responsibilities to other members of the health care team. Team members can function both in and out of the facility in which the physician is housed.

Programs that extend the arm of the physician and enable him to care for more patients place heavy emphasis on prevention of disease, maintenance of good health and home care. Education of the patient is quite important in terms of self-care, adoption of sound health habits and appropriate use of health care services and facilities. Outreach into the territory covered by the physician thus becomes an essential aspect of the system. Delivery of services in the home by specially trained nurses can be quite relevant to the needs of the chronically ill patient, and convenient for those who require simple follow-up care after a visit to the physician. Public health nurses, environmentalists, multi-specialty aides and others can provide important outreach services. With an effective partner-

ship between those in the field and those working directly with the physician in his office, continuous comprehensive care is possible.

Physicians participating in such programs require, of course, adequate backup support. Linking the primary physician with more extensive resources outside the local community is basic to the concept of increasing his effectiveness. Cooperation between existing physicians and other health resources in the local area is also important to the team approach to health care delivery. For example, cooperation between the physician and local public health personnel is necessary for an effective program of health outreach.

Variations on this idea of extending the arm of the physician range from: (1) a specially trained assistant under the supervision of a single physician, to (2) several teams of health workers, each team under the direction of one of a number of local physicians linked together in a loose association, to (3) the idea of a formal group practice functioning as team manager.

While the team approach to extending the services of the physician does not require the formal organization of physicians into a single group, there are distinct advantages in some degree of reorganization of local resources to serve a larger area than the single rural community. For example, if physician resources were organized into associations (as opposed to formal group practices) and housed in facilities strategically located at key points in the larger rural area, certain economies would result from shared facilities, equipment and services of allied health personnel. This approach would also enable the development of linkages with backup resources located in larger towns outside the local medical trade area. Through this coordination of physician manpower, the individual doctor has more time for continuing education and related kinds of activities.

Lawrence County, Alabama

—With emphasis on outpatient services and preventive health care, this model system serves a rural county of more than 30,000 population facing an acute physician shortage.

—Appalachian Regional Commission funds help support a cooperative effort by local health and community leaders and the University of Alabama. Use of team approach by local physicians increases efficiency and provides outreach into the community.

—University of Alabama trains physician's assistants to work with local doctors. Family practice residents, supervised by local physicians, are rotated through family care units.

—Close links exist between private and public health, especially in regard to outreach teams composed of public health nurses, environmental health workers and multi-purpose aides.

—The University of Alabama Medical School cooperates with local physicians by providing consultative and diagnostic support, continuing education and refresher experiences.

Monterey County, California

—Through a grant from the Office of Economic Opportunity, a private group of physicians is working in conjunction with the county medical society to provide comprehensive medical care to indigent patients in the same facilities utilized by paying patients.

—Consumers serve on an advisory council and as employees in the project. Health aides from the target population are recruited and trained to establish communication with community residents and solicit participation in the program. Health aides also work in the local community hospital, an integral part of the project.

—Care is provided by a health team of private practitioners, nurse pediatricians, physician's assistants, public health and social welfare workers, and indigenous health aides. Emphasis is on treatment for current medical problems and education of patients in routine preventive care. A strong home care component is made possible by a home health agency established by the private medical group.

—Patient transportation is provided to the main physician clinic, two satellite clinics and the local community hospital.

BRINGING ON-SITE PHYSICIAN SERVICES TO SHORTAGE AREAS

Some experiments in rural health care delivery provide on-site physician services to areas lacking their own physician, and having poor access to health care resources located elsewhere. Some university teaching centers have cooperated with communities to establish programs in which the university supplies a physician or physicians to man a rural health center and manage a team of allied health personnel. Typically, these physicians have active teaching appointments at the university and enjoy the benefits of a direct link with all needed backup resources. As an integral part of the university teaching program, these rural health centers serve as a training ground for medical and nursing students who are rotated through on a regular basis.

In most instances health center personnel relate quite closely to local public health resources. Typically, the facility for a rural health center program is provided by the community. The services of the rural health center may be directed to indigent families or, if no other sources of care are available, to all persons in the area covered. By charging a fee for those able to pay, these centers can become self-supporting. Use of the team approach and a wide range of outreach services enables such programs to provide not only an entry point into the health care system, but also comprehensive high quality care with full assurance that all needed services will be made available.

In an effort to secure on-site physician services, several communities might pool their efforts to recruit physicians from the area on a part-time basis until permanent staff can be obtained. In return for such services the communities could provide a well-equipped facility and help secure needed ancillary personnel. Such an approach could provide an attractive

situation both for the part-time physicians and the physicians recruited to staff the center on a permanent basis. Physicians may be more receptive to temporarily assuming the additional responsibilities of staffing such a center part-time if they know that permanent staff is being vigorously sought. In addition, the employment of several doctors on a part-time basis and the judicious use of ancillary personnel could lessen considerably the burden imposed on any one practitioner, especially with regard to night and weekend coverage. Similarly, the prospect of becoming an integral part of an ongoing health program, complete with fellow practitioners for consultative and backup support and ancillary personnel to improve efficiency, should be a strong point in the recruitment of permanent physicians.

The National Health Service Corps (NHSC) is a federal government program designed to make physicians and other types of health professionals available on an interim basis to selected areas with critical manpower shortages. The field operations of the NHSC are primarily in the form of organized community projects. It is intended that physicians assigned by the Corps will be linked with health care resources in the region, and work with a team of health professionals to provide primary care. In assigning NHSC personnel to a community, emphasis is on local support for the project. Communities seeking NHSC assistance must be prepared to cooperate with the Corps in developing the kind of health care system that can integrate Corps personnel with existing resources and necessary backup support. Although the NHSC is not intended as a long term solution to the problem of physician shortage, it does have the potential to alleviate some of the more acute health care delivery problems in rural areas.

"Cross-Road Medical Center"—New York State

—The idea of a multiple physicians' center is sponsored by the State Medical Society. Each center will serve a defined geographic area which has no physician, and which encompasses four or five neighboring communities with a total population of between 10,000 and 30,000. Communities will cooperate to support part-time physician services in a centrally located facility furnished and equipped by the participating communities.

—Each center is to be staffed by specialists and family practice physicians from the surrounding area until permanent physicians can be obtained. The State Medical Society will assist with physician recruitment. Physicians will have staff appointments at nearby hospitals which provide backup support.

Lafayette County, Florida

—University of Florida College of Medicine is sponsoring a community-oriented comprehensive health care program in a county with about 3,000 residents and no available physician services.

—County health clinic provides space and is the base of operations, and county health nurse is a member of the permanent staff of the program.

—University of Florida utilizes the program to provide a teaching and training experience for medical and nursing students and house staff in community medicine. Students rotated through the program work under the supervision of a resident in medicine. Students not only live and work in the community, but are active in all community matters relating to health.

—County residents comprise advisory committee which assists in planning and operation of the center.

—A fee for those able to pay has helped to make the center self-supporting.

PHYSICIAN-DIRECTED SATELLITE SERVICES

Another general approach to health care delivery is to extend physician services by way of satellite arrangements, with persons other than physicians serving as the entry point. In this way the physician, not generally on-site, can have direct communication links with the satellite personnel by radio, closed circuit television and various types of monitoring devices. The physician maintains the role of manager of patient care. The specially trained assistant in the satellite provides some basic health care and refers to the physician cases requiring more expect attention. This relieves the physician of much of the burden of routine patient management responsibilities. Although this arrangement does not allow for continuous on-site supervision of the assistant by the physician, the scope of practice of the assistant is carefully defined. The assistant generally provides preventive health services, some emergency services and follow-up for persons under the care of the physician. The physician makes regular visits to the satellite facility thus assuring that patients needing further attention receive the required care.

There are several ways in which this type of model can be implemented. In some cases medical schools have sponsored such programs, with physicians in the teaching centers supervising outpost personnel. Medical school participation is important in providing both backup to satellite personnel and training for the assistants to the physician who will man the facility. Community hospitals will probably assume increasing responsibility for the training and backup of ancillary health personnel. At least one medical school in North Carolina is encouraging community hospitals to assume a larger role in training these health professionals. When trained, these people could be utilized either as front line personnel in a satellite clinic physically removed from the hospital, or as assistants within an expanded program of outpatient services in the hospital itself. In either case, the hospital staff would provide backup and supportive services and help to assure continuity of care. This is often preferable to relying on the already overburdened physician in the community to assume responsibility for the training, and subsequent supervision and backup of ancillary personnel.

Ideally, linking a satellite or satellites to a physician or group of physicians at a centralized location such as a health center or community

hospital would be more effective as part of an organized primary care program incorporating transportation and other supportive services. The breadth of such a program will depend on existing and potential health resources in the area and on the type of physician support which may be secured.

A satellite need not be a fixed facility. Mobile units often function as satellites, providing either a wide range of front line medical services, or more specialized types of services such as immunizations, prenatal and well baby care and special screening programs. Mobile units are especially effective in areas where many people are remote from stationary facilities or transportation problems are acute.

Farmington, North Carolina

—By arrangement between the Department of Community Medicine of Bowman Gray School of Medicine and a local incorporated citizens group, the services of a nurse practitioner are available to an estimated population of 5,000 to 10,000 in a community 20 miles from Winston-Salem.

—Backup support for the nurse practitioner is provided by house staff and faculty from Bowman Gray. On-site services of the nurse practitioner, as the mainstay of the program, are supplemented by regular visits from student nurses, physician's assistant students, medical students and house officers, all operating under faculty supervision.

—A family nurse practitioner has principal responsibility for the primary health care of individuals and families participating in the program. Emphasis is on health maintenance and prevention. Depending upon the nature of the problem, the family nurse practitioner can follow one of three options in handling the patient: immediate intervention, arrangement for emergency care or referral to a physician.

—The program operates on a fee-for-service basis with necessary adjustments for those unable to pay.

Prospect Hill, North Carolina

—One of three satellite facilities in an OEO-supported comprehensive health services network in Orange and Chatham counties. The Medical School of the University of North Carolina and North Carolina Memorial Hospital provide backup to the Prospect Hill Clinic in northeast Orange County. The clinic is manned full-timed by a family nurse practitioner and operates in much the same manner as the Farmington project.

Physician-Monitored Remote Area Health Program, New Mexico

—NASA Manned Spacecraft Center has submitted a proposal to sponsor physician-monitored remote health centers utilizing sophisticated electronic sensoring equipment operated by allied health personnel to transmit patient's vital signs to a computer-controlled center. The physician is to be located at the center and will monitor the patient's symp-

toms and advise remote health center personnel via radio or television concerning treatment.

—Patients will be enrolled either by their physician during a regular visit or by a mobile survey unit. Medical history and other information will be recorded and stored in a computer. When a patient becomes ill he can travel to the nearest remote health center, or be called upon by a mobile unit which is linked to the central computer center.

—The program initially will involve about 95,000 people in a 50,000 square mile area of southwest New Mexico, currently served by less than 30 physicians.

Note: This project is included to illustrate how modern communication techniques used in conjunction with allied health personnel make it possible for remote rural areas to indirectly receive the services of a physician. This project may be too sophisticated and costly to adapt and use in most rural communities. However, some of the components have realistic application, especially the use of radio and television to link ancillary personnel in the satellite with the supervising physician.

Part IV

Recruiting a Physician—
Some Basic Guidelines

INTRODUCTION

Acquiring a local physician will be a difficult task requiring all the initive and resourcefulness that a community can muster. Because there will be keen competition from other communities, government agencies, health institutions and other organized health programs, a community must be as active as it would be in trying to attract a new industry.

It is assumed that the community, through the local health planning process, has identified the need for additional physicians and concluded that the community is able and willing to support an increased level of physician services. It is also assumed that the planning committee is cognizant of the realities of current patterns of physician practice, and is attempting to develop an attractive medical practice setting.

THE PHYSICIAN'S CHOICE OF A PRACTICE SETTING

Most doctors do not wish to practice in isolation. If a community can support only one physician, it will face certain problems. First, such a community is obviously at a disadvantage in initially attracting a physician—a doctor will not want to practice where supportive and consultative services are not available. Second, if the community should secure a single practitioner, the absence of backup services and adequate relief may force him to leave the community. Third, a solo practitioner may not be able to maintain the staff and purchase the sophisticated equipment necessary to give patients the care that medicine is able to offer today. In this case, residents may be tempted to bypass the local doctor for important illnesses and utilize his services only for minor ailments. Under such conditions a doctor may move his practice, feeling that his talents could be used more profitably elsewhere.

Today's physician needs more support in terms of education, staff and equipment than his counterpart of fifteen to twenty years ago. Because such support is limited in many small communities, it would be more practical and satisfactory to plan for physician care on a larger geographic basis. If several neighboring communities, each able and willing to support a doctor, pool their resources and jointly sponsor a centrally located office or clinic to serve the entire area, the results in terms of quality of care, physician satisfaction and ability to retain doctors could be quite rewarding.

The community should remain as objective as possible in considering the advantages and opportunities it can offer a physician. Many communities tend to overemphasize the importance of physicial facilities. There is a widespread feeling that the presence of a vacant doctor's office, a building that could be converted to medical use or the promise of a new office or clinic is the most important single item in attracting a physician. However, scores of vacant offices across the state illustrate the fact that the presence of such facilities exerts little influence in attracting a doctor. Many communities fail to recognize that other factors are important to a physician's practice, and that if facilities have to be provided,

the doctor might wish to have them built to his specifications. The community should focus its efforts first on acquiring a doctor and then perhaps, as further incentive, offer to build a new facility or renovate an old one to meet the needs and wishes of the physician.

Some of the factors that are significant in influencing a physician's decision include:

—Availability of trained supportive personnel (nurses, technicians and office staff).

—Opportunity for continuing education. (Does the nearest medical school offer programs that could benefit a local doctor? Would the community cooperate in allowing him the opportunity to take advantage of these programs?)

—Availability of a local or nearby pharmacy.

—Availability of laboratory, diagnostic and specialty services.

—Willingness of a nearby hospital to accept a new doctor as a staff member. (An invitation to join a hospital staff is a decided advantage in any recruitment effort.)

—Availability and efficiency of emergency medical services in the area.

—Availability of other physicians in the area for coverage, consultation and specialty referrals.

Although a doctor will be interested in the advantages a community can offer him in his practice, he may be more concerned with the community as a place to live. He and his family will be interested in adequate housing, educational, social, recreational and cultural opportunities, churches or synagogues and, in general, a progressive spirit among the residents. The physician's wife plays an important role in the decision. A community should not neglect the wife, her needs and desires, if it hopes to entice her husband into setting up practice in the area. Often a single characteristic of a community can be quite important in influencing the physician and his family. An exceptionally fine school system, for example, could influence them to accept certain negative factors such as limited social and cultural activities. A doctor's perception of a community will vary according to his own needs, interests and attitudes.

GENERATING PHYSICIAN INTEREST IN THE COMMUNITY

DEVELOPING A BROCHURE

Once a community decides it needs and can support a physician, and has carefully considered the advantages and opportunities it can offer a doctor, it may wish to develop a brochure describing the community. Al-

though the content will vary from community to community, it should be comprehensive enough to satisfy the various institutions, organizations and individuals to whom it will be sent.

The following items are suggested for inclusion in the brochure:

—Current population and seasonal variations, if significant; total population 10-20 years ago and percentage change; projected population 10-20 years hence; total and percent of population that is urban and rural; age and ethnic distribution of population; average family size.

—Climate and topography; mean monthly temperature; average annual and/or monthly precipitation, including snowfall; average elevation of area and character of local relief i.e. flat, hilly or rolling, mountainous.

—Distance and travel time to neighboring towns and nearest city; road, railroad and airport facilities (if possible include a map).

—Chief sources of income of residents; average yearly income; per capita income; effective buying income per household; number and percent of total occupied housing units classified as substandard.

—Employment (number and percent) by occupational groups, i.e. professional and managerial, clerical and sales, services, farming, etc., and/or by industry group, i.e. manufacturing (food, tobacco, paper, chemical, etc.) and nonmanufacturing (trade, construction, finance, services, government, etc.); unemployment statistics.

—Number and types of businesses in community; gross retail sales; per capita retail sales.

—Industrial development and trends; number and percent of residents employed in manufacturing.

—Types of schools in community (include elementary, secondary and higher education facilities, public and private), their enrollment and location; median number of school years completed by residents; number and percent of high school graduates entering college; average per pupil expenditure for public education; plans, if any, for new educational facilities in the area.

—Social and fraternal organizations; recreational opportunities; cultural facilities available; number of churches, denominations and membership; location of nearest shopping center of area.

—Number of physicians in the area, their ages, specialty, type of practice (solo, group) and location; availability of other health and health related personnel.

—Location of nearest hospital and services (emergency, laboratory, diagnostic, consultative) it will offer physician; nearest medical center, college or university and opportunities each may offer doctor for continuing education; number, accessibility and utilization of

ambulance services, community health centers, health departments, home health care agencies and health planning agencies.

—Availability of office space and equipment; if office space unavailable, indicate if community will build and equip to doctor's specifications, and if costs will be borne completely or partially by community.

—Availability of housing; number of owner and renter occupied housing units in community; median value of owner occupied units; median rent of renter occupied units.

—Availability of arrangements to alleviate the financial strain of the first few years of medical practice in the community, such as loans which burden neither the doctor nor community; initial low rental on office and home with option to later purchase or pay full rental.

—Communications from:

The mayor, town council and/or other responsible local officials inviting doctor to settle in community.

Nearest hospital, offering staff privileges.

Local or nearby physician endorsing the recruitment effort, and inviting doctor to practice in the area.

—Photographs of the community, either in separate portion of the brochure or integrated with text.

—Unique features of the community.

—Address and telephone number of community spokesman who could be easily contacted.

Some communities may wish to expand on certain of the above items, while restricting or deleting others. Whatever the content of the final product, it should represent an honest effort to depict as accurately and completely as possible the community as an opportunity for medical practice. For a doctor to visit and discover that the situation is not as attractive as had been suggested would be extremely damaging.

Much of this information is available from various departments of local, state, and federal government, professional associations and planning agencies. Local sources of information could include: Chamber of Commerce, North Carolina Employment Security Commission, Economic Development Commissions or similar group, Areawide Comprehensive Health Planning Agencies, physicians and other health professionals, health departments, fire and police departments and county extension services (See Appendix for selected data sources).

CONTACTING APPROPRIATE RESOURCES

When the brochure or booklet has been completed, the community

should contact various sources of potential assistance. Among alternatives open to the community, contact could be made with:

—*The Physician Placement Service of the Medical Society of the State of North Carolina and/or the Secretary of the Old North State Medical Society.* The placement service of the North Carolina Medical Society acts basically as a clearinghouse for requests both from physicians wishing to locate or relocate in North Carolina, and communities wishing to secure a physician. The Society is not involved in physician—community negotiations, but maintains an updated list of physicians and communities designed to bring the two together. The Society will furnish these lists to a doctor or community upon request. When contacting the Society, include a copy of the brochure, and determine if a representative of the community could meet with the Society's field representative to discuss the community's needs.

—*Physician Placement Services of the American Medical Association.*

—*Deans of the Medical Schools.* A letter and copy of the brochure could be sent to the deans of the medical schools in North Carolina and neighboring states. This approach may not be very effective, however, if the town is seeking a family physician. Efforts, perhaps, should be more specifically directed to:
Deans or Chairmen of the Departments of Community Medicine or Community Health Services; or the Directors of the Departments of Family Medicine or Family Practice Residency Programs.

—*Hospitals.* Most doctors decide on their future course in medicine during internship and residency. These then are opportune times for the community to contact a physician. The community's brochure can be placed on the bulletin boards of teaching hospitals and hospitals with family practice residency programs and approved internships. It may be possible for a community representative to speak to the interns and residents at these hospitals about the needs and opportunities in his community. Since most doctors finish their internships and residencies in June and July, the best time to make such contacts is winter or early spring.

—*Health Journals.* Health journals, national, state and local, can be used to list openings for medical practice. An advertisement should provide as much information about the community as possible and should be placed in the winter and early spring.

—*State Board of Medical Examiners.*

—*Commercial Medical Placement Bureaus and/or Professional Consultants.* The community may also list its request with a private medical placement bureau and/or employ a professional consultant.

—*Medical Care Commission.* The Commission, which administers a loan program for medical and related studies, will provide a community with a list of medical loan recipients currently available for

practice under terms of the loan agreement. The community is responsible for all contacts and negotiations with the physician (See Appendix for addresses of the above contacts).

A community should not confine its recruitment efforts to North Carolina. Individuals and institutions in other states should be contacted. North Carolina may be very attractive to a physician in New York City or Chicago.

If the community knows of medical students, interns or residents who have small town or rural backgrounds, it may be profitable to approach them with the community's offer. Physicians reared in a nonmetropolitan area are much more likely to set up practice in a small community than doctors with urban backgrounds. In some cases a community may be able to financially aid a medical student in return for an agreement that he will serve a defined period of time in the community for each year he is so supported. Such an approach would involve more than simply providing financial support—the community must exhibit genuine personal interest in the student and must assure him that his services will be welcome after graduation.

KEEPING THE NEW PHYSICIAN

If the community is fortunate enough to acquire a physician, continuing effort must be made to keep him. The community must remain sensitive to the needs of the physician and work to maintain the kind of environment that will encourage him to remain. The following may serve as useful suggestions:

—The community must support the new doctor by fully utilizing his services. It must be remembered that he came in response to the community's needs, and he will provide good medical care. At the same time, residents must be considerate of the demands they make on him and must respect his need for relaxation and privacy.

—The doctor and his family should be invited to become involved in various community activities. However, the doctor's free time is limited and he must place restrictions upon his extracurricular activities if he is to function effectively as a physician.

—If the doctor is paying reduced rent on his home and office, this practice should be continued until he feels he is earning an adequate living and is able either to pay full rent or purchase.

—The community must respect the physician's need and desire to attend medical meetings and refresher courses to keep abreast of medical advances.

—If the physician feels that additional personnel or equipment would enable him to deliver higher quality care to more people, the community should cooperate in every way possible.

It is hoped that the information in this booklet will be useful to communities both in their efforts to organize for health planning and in the conduct of the health planning function itself. The booklet has stressed the importance of mobilizing community interests and talents in the development of innovative approaches to health care delivery which will offer greater incentives to the physician and other health professionals. The need to effectively utilize all available resources has also been emphasized.

The Committee on Community Health Assistance stands ready to provide guidance and assistance at any stage in the planning process to local groups working to bring about improvements in health care delivery. The effectiveness of the Committee, however, will be limited by time and financial constraints. In the final analysis, it will be the commitment of the community to obtaining optimum health care for all its residents that will be the primary determinant of its success.

Appendices

APPENDIX A

MEMBERSHIP OF THE COMMITTEE ON COMMUNITY HEALTH ASSISTANCE

Charles W. Styron, M.D. (Chairman)
Past President
Medical Society of the State of North Carolina
Box 27167
Raleigh, North Carolina 27611

W. G. Anlyan, M.D.
Vice President for Health Affairs
Duke University
Box 3701
Durham, North Carolina 27706

Thornton R. Cleek, M.D.
Past President
North Carolina Academy of Family Physicians
379 S. Cox Street
Asheboro, North Carolina 27203

Donald M. Hayes, M.D.
Professor & Chairman
Department of Community Medicine
Bowman Gray School of Medicine
Winston-Salem, North Carolina 27103

Mr. William F. Henderson
Deputy Secretary
North Carolina Department of Human Resources
112 W. Lane Street
Raleigh, North Carolina 27603

Jacob Koomen, M.D.
State Health Director
State Board of Health
Raleigh, North Carolina 27602

F. M. Simmons Patterson, M.D.
Executive Director
North Carolina Regional Medical Program
Box 8248
Durham, North Carolina 27704

Daniel C. Roane, M.D.
President
Old North State Medical Society
602 Walnut Street
Wilmington, North Carolina 28401

Jack W. Wilkerson, M.D.
Past President
North Carolina Academy of Family Physicians
1001 East 4th Street
Greenville, North Carolina 27834

Mr. Glenn Wilson
Associate Dean
Community Health Services
School of Medicine
University of North Carolina
Chapel Hill, North Carolina 27514

APPENDIX B

EMERGENCY MEDICAL SERVICES

It has been noted elsewhere in this booklet that emergency medical services (EMS) probably represent the weakest aspect of the total health care delivery system. The fragmentation of services that often exists between physicians, ambulance companies, rescue squads and hospital administrators leads to the inefficient functioning of many EMS systems. Yet this is an element of health care that can be improved if a community recognizes the need for adequate, well-coordinated emergency medical services, and initiates concerted community-wide action to develop these services. The community must realize, however, that efficient emergency medical services can be developed only if each of the components of the system intermesh, and the system itself is an integral part of a total health care delivery program.

An EMS system capable of marshalling the community resources necessary to meet emergencies, whatever their magnitude, is composed of four basic components: 1) adequate treatment at the scene of the emergency; 2) a communication system which assures prompt response to a need; 3) well staffed and equipped emergency transportation; and 4) high quality hospital emergency care facilities and staff. An evaluation of these EMS components by the community is essential to any realistic planning for improved emergency services. Such an evaluation should be both an essential first step in planning and a continuing activity. Revaluation should be designed to provide information on which to plan for further improvements in services, and to stimulate the various agencies providing the services to maintain them at the highest possible level.

A community must also consider how the EMS system relates to other aspects of the total health care delivery system. In examining some of the ways in which physician services might be made available, a community should recognize that emergency care must be closely tied to any arrangements it devises to obtain personal health care services. An EMS system cannot function properly in isolation—it requires the kind of supportive and backup services that working relationships with other aspects of the total health care delivery system can afford.

APPENDIX C

SELECTED DATA SOURCES FOR DEVELOPING A BROCHURE

American Hospital Association. *Hospitals*, Guide Issue. Chicago: American Hospital Association. (issued annually; statistical information on inpatient facilities, including size, ownership, and patterns of organization and utilization).

American Medical Association. *Distribution of Physicians, Hospitals, and Hospital Beds in the United States.* Chicago: American Medical Association. (issued annually; statistical information on physician population, hospitals and hospital beds by region, state, county, and metropolitan area).

Employment Security Commission of North Carolina. *North Carolina Insured Employment and Wage Payments.* Raleigh: Employment Security Commission. (issued annually; summarizes, by county, employment and wage data of workers insured under the North Carolina Employment Security Law).

Health Insurance Institute. *Source Book of Health Insurance Data.* New York: Health Insurance Institute. (issued annually; includes statistical material compiled from insurance and government agencies, hospital and medical associations).

Lonsdale, Richard E. *Atlas of North Carolina.* Chapel Hill: The University of North Carolina Press, 1967. (general purpose atlas designed to serve the needs of everyone concerned with the physical, economic and social aspects of North Carolina).

North Carolina Department of Administration, Budget Division. *North Carolina State Government Statistical Abstract.* Raleigh: Department of Administration, 1971. (a convenient reference containing selected statistical indicators of the many and diverse services provided by state government).

_____. *Profile North Carolina Counties.* Raleigh: Department of Administration, (issued annually; contains information, by county, on population, employment, retail sales etc.).

North Carolina State Board of Health, Public Health Statistics Section. *North Carolina Vital Statistics.* Raleigh: State Board of Health. (issued annually; includes information on births, deaths, marriages and divorces for state, counties and selected cities).

North Carolina State University, Agricultural Experiment Station. *Weather and Climate in North Carolina.* Raleigh: North Carolina State University, 1963.

Sales Management, Inc. *Sales Management Survey of Buying Power.* New York: Sales Management, Inc. (issued annually; contains economic data, including income by income bracket, per capita income and effective buying power for all states, counties and metropolitan areas).

United States Department of Commerce, Bureau of the Census. *Congressional District Data Book*. Washington: Government Printing Office. (supplement to statistical abstract published for each Congress, and containing information on population, education levels, income and consumption for each Congressional district).

_____. *County and City Data Book*. Washington: Government Printing Office. (supplement to Statistical Abstract containing information on population, education levels, income and consumption by county and city).

_____. *Current Population Reports*, series P-25. Washington: Government Printing Office.

_____. *Directory of Federal Statistics for Local Areas, a Guide to Sources*. Washington: Government Printing Office, 1970.

_____. *North Carolina County Business Patterns*. Washington: Government Printing Office (issued annually; contains information on payroll, number of employees for various business groups).

_____. *Statistical Abstract of the United States*. Washington: Government Printing Office (issued annually; contains national data and guide to additional sources of information).

_____. *United States Census of Business*. Washington: Government Printing Office (issued every five years; contains information on retail and wholesale trade and selected services for geographic units as small as counties).

_____. *United States Census of Housing*. Washington: Government Printing Office (issued every 10 years).

_____. *United States Census of Population*. Washington: Government Printing Office (issued every 10 years).

United States Department of Health, Education and Welfare, Public Health Service. *Health Resources Statistics*. Washington: Government Printing Office (statistics on health manpower and resources).

_____. *Vital and Health Statistics*. Washington: Government Printing Office (several series published; contains information on the leading causes of morbidity, mortality and health service utilization by age, sex, location etc.).

APPENDIX D

SUGGESTED CONTACTS FOR ASSISTANCE WITH PHYSICIAN RECRUITMENT

Physician Placement Service
Medical Society of the State of North Carolina
P. O. Box 27167
Raleigh, North Carolina 27611

W. T. Armstrong, M.D.
Secretary - Treasurer
Old North State Medical Society
Box 1337
Rocky Mount, North Carolina

Physician Placement Service
American Medical Association
535 N. Dearborn Street
Chicago, Illinois 60610

Christopher C. Fordham, III, M.D.
Dean
School of Medicine
University of North Carolina
Chapel Hill, North Carolina 27514

Thomas D. Kinney, M.D.
Director of Medical Education
Duke University Medical Center
Durham, North Carolina 27710

Richard Janeway, M.D.
Dean
Bowman Gray School of Medicine
Winston-Salem, North Carolina 27103

Mr. Glenn Wilson
Associate Dean
Community Health Services
School of Medicine
University of North Carolina
Chapel Hill, North Carolina 27514

E. Harvey Estes, Jr., M.D.
Chairman
Department of Community Health Sciences
Duke University Medical Center
Durham, North Carolina 27710

Donald M. Hayes, M.D.
Professor and Chairman
Department of Community Medicine
Bowman Gray School of Medicine
Winston-Salem, North Carolina 27103

North Carolina Medical Journal
Medical Society of the State of North Carolina
P. O. Box 27617
Raleigh, North Carolina 27611

Journal of the American Medical Association
Classified Advertising Department
535 N. Dearborn Street
Chicago, Illinois 60610

Tar Heel Practitioner
North Carolina Academy of Family Physicians
607 Gaston Street
Raleigh, North Carolina

Family Physician
American Academy of Family Physicians
216 Volker Boulevard
Kansas City, Missouri 64112

State Board of Medical Examiners
222 N. Person Street
Suite 214
Raleigh, North Carolina 27611

The North Carolina Medical Care Commission
Box 25459
Raleigh, North Carolina 27611

APPENDIX E

APPROVED GRADUATE TRAINING PROGRAMS IN FAMILY PRACTICE

(The following programs have been approved by the Residency Review Committee for Family Practice under the "Essentials of Approved Residencies in Family Practice. The committee is composed of representatives of the AAFP, ABFP and the Council on Medical Education of the AMA.)

Universities & Hospitals	Program	Program Director or Person in Charge
Good Samaritan Hospital 1130 East McDowell Road Phoenix, Arizona 85006	Family Practice Residency	Robert A. Price, M.D. Family Practice Center 1130 East McDowell Road Phoenix, Arizona 85006
*University of Arizona Medical Center 1501 North Campbell Tucson, Arizona 85724	Family Practice Residency	Jesse W. Tapp, M.D. Family Health Center 332 So. Freeway Tucson, Arizona 85705
University of Arkansas School of Medicine 4301 West Markham Little Rock, Arkansas 72201	Family Practice Residency Program	John Tudor, M.D. St. Vincent Infirmary Markham at University Little Rock, Arkansas 72201
*Naval Hospital Camp Pendleton, California	Family Practice Residency	LCDR R. L. Donnell, MC USN Naval Hospital Camp Pendleton, California 92055
Valley Medical Center Fresno, California	Family Practice Residency	Ronald Smith, M.D. Valley Medical Center of Fresno Fresno, California 93702
Hoag Memorial Hospital Presbyterian University of California Irvine, California 92664	Family Practice Residency Program	John F. Bridgeman, M.D. Hoag Memorial Hospital Presbyterian 301 Newport Boulevard Newport Beach, California 92660
Loma Linda University Medical Center Loma Linda, California	Family Practice Residency	Raymond O. West, M.D. Department of Family Practice Loma Linda University School of Public Health Loma Linda, California 92354
Kaiser Foundation Hospital 4867 Sunset Boulevard Los Angeles, California 90027	Family Practice Residency	I. M. Rasgon, M.D. Kaiser Foundation Hospital 4867 Sunset Boulevard Los Angles, California 90027
University of California Los Angeles School of Medicine Los Angeles, California	Family Medicine Residency	To be named Los Angeles County Harbor Hospital 1000 West Carson Torrance, California 90509
University of California (Davis) Affiliated Hospitals Sacramento Medical Center 2315 Stockton Boulevard Sacramento, California 95817	Family Practice Residency	L. Hughes Andrus, M.D. University of California Davis School of Medicine Davis, California 95616
San Bernardino County General Hospital 780 East Gilbert Street San Bernardino, California 92404	Family Practice Residency	Wendell L. Ogden, M.D. San Bernardino County General Hospital 780 East Gilbert Street San Bernardino, California 92404
*Santa Cruz General Hospital Santa Cruz, California	Family Practice Residency	William E. Whitstone, M.D. Family Practice Center 1080 Emeline Street Santa Cruz, California 95060

Universities & Hospitals	Program	Program Director of Person In Charge
Santa Monica Hospital & Medical Center 1250 Sixteenth Street Santa Monica, California 90404	Residency in Family Practice	Thomas L. Stern, M.D. Santa Monica Hospital 1250 Sixteenth Street Santa Monica, California 90404
Community Hospital of Sonoma County 3225 Chanate Road Santa Rosa, California 95402	Family Practice Residency	Norman C. Headley, M.D. Family Practice Residency Community Hospital of Sonoma County Santa Rosa, California 95402
General Hospital Ventura County 3291 Loma Vista Ventura, California 93001	Family Practice Residency	J. Austin Daly, M.D. General Hospital Ventura County 3291 Loma Vista Ventura, California 93001
Mercy Hospital 1619 Milwaukee Street Denver, Colorado 80206	Family Practice Residency	Carl Flaxer, M.D. Mercy Hospital 1619 Milwaukee Street Denver, Colorado 80206
University of Colorado School of Medicine 4200 East 9th Avenue Denver, Colorado 80220	Division of Family Practice	Herbert Brettell, M.D. University of Colorado Medical Ctr. 4200 East 9th Avenue Denver, Colorado 90220
Bridgeport Hospital 267 Grant Street Bridgeport, Connecticut 06602	Family Practice Residency	Alexander Berger, M.D. Bridgeport Hospital 267 Grant Street Bridgeport, Connecticut 06602
Hospital of St. Raphael 1450 Chapel Street New Haven, Connecticut 06511	Family Practice Residency	Joseph Mignone, M.D. Family Practice Residency Hospital of St. Raphael 1450 Chapel Street New Haven, Connecticut 06511
Wilmington Medical Center Wilmington, Delaware	Family Practice Residency	Dene T. Walters, M.D. Wilmington Medical Center P. O. Box 1668 Wilmington, Delaware 19899
Howard University of Medicine 520 West Street, N.W. Washington, D. C. 20001	Family Practice Residency	William E. Matory, M.D. Freedman's Hospital Sixth & Bryant Streets, N.W. Washington, D. C. 20001
Malcolm Grow U. S. Air Force Medical Center Andrews Air Force Base Washington, D. C. 20331	Family Practice Residency	Capt. David L. Hoff MC Malcolm Grow U. S. Air Force Medical Center Andrews Air Force Base Washington, D. C. 20331
Halifax District Hospital P. O. Box 1990 Clyde Morris Boulevard Daytona Beach, Florida 32015	Family Practice Residency	William H. Hubbard, M.D. Family Practice Center Hilton Avenue at Highland Daytona Beach, Florida 32015
*St. Vincent's Hospital Jacksonville, Florida	Family Medicine Residency	L. E. Masters, M.D. St. Vincent's Hospital Barrs and St. John's Avenue Jacksonville, Florida
U. S. Naval Hospital Jacksonville, Florida 32214	Family Practice Residency	John V. Dervin, M.D. Department of Family Medicine Box 171 U. S. Naval Hospital Jacksonville, Florida 32214

Universities & Hospitals	Program	Program Director or Person in Charge
University of Miami School of Medicine Miami, Florida 33152	Division of Family Medicine (Jackson Memorial Hospital)	Robert Roy, M.D. University of Miami School of Medicine P. O. Box 875 - Biscayne Annex Miami, Florida 33152
*The Medical Center Columbus, Georgia	Family Practice Residency	Howard G. Vigrass, M.D. The Medical Center Family Practice Unit 1936 Eighth Avenue Columbus, Georgia 31902
MacNeal Memorial Hospital 3249 South Oak Park Avenue Berwyn, Illinois 60412	Family Practice Training Program	Kenneth F. Kessel, M.D., ABFP MacNeal Family Practice Training Program MacNeal Memorial Hospital 3249 South Oak Park Avenue Berwyn, Illinois 60412
West Suburban Hospital 10 West Ontario Street Oak Park, Illinois 60302	Family Practice Residency	A. L. Burdick, Jr., M.D. West Suburban Hospital 10 West Ontario Street Oak Park, Illinois 60302
Peoria School of Medicine University of Illinois College of Medicine Peoria, Illinois 61602	Family Practice Residency	Dean K. Bordeaux, M.D. & Fred Z. White, M.D. Methodist Hospital of Central Illinois Peoria, Illinois 61603
St. Francis Hospital 530 NE Glen Oak Avenue Peoria, Illinois 60613	Family Practice Residency	C. F. Neuhoff, M.D. St. Francis Hospital Peoria, Illinois 61603
University of Illinois College of Medicine Rockford, Illinois	Family Practice Residency	L. Paul Johnson, M.D. Rockford Medical Education Foundation 1601 Parkview Avenue Rockford, Illinois 61101
Southern Illinois University College of Medicine St. John's Hospital 701 East Mason Street Springfield, Illinois 62701	Family Practice Residency	William L. Stewart, M.D. St. John's Hospital 701 East Mason Street Springfield, Illinois 62701
*St. Mary's Hospital Evansville, Indiana	Family Practice Residency	Raymond W. Nicholson, M.D. Family Practice Clinic St. Mary's Hospital 800 St. Mary's Drive Evansville, Indiana 47715
Methodist Hospital of Indianapolis, Inc 1604 North Capital Avenue Indianapolis, Indiana 46202	Family Practice Residency Program	Ronald Blankenbaker, M.D. Methodist Hospital Graduate Medical Center 1604 North Capital Avenue Indianapolis, Indiana 46202
Saint Vincent's Hospital 120 West Fall Creek Parkway Indianapolis, Indiana 46208	Family Practice Residency	A. Alan Fischer, M.D. Saint Vincent's Family Practice Center 120 West Fall Creek Parkway Indianapolis, Indiana 46208
Ball Memorial Hospital 2401 University Avenue Muncie, Indiana 47303	Family Practice Residency	Ross L. Egger, M.D. Ball Memorial Hospital 2401 University Avenue Muncie, Indiana 47303

Universities & Hospitals	Program	Program Director or Person in Charge
Memorial Hospital of South Bend 615 North Michigan Street South Bend, Indiana 46601	Family Practice Residency	L. L. Frank, M.D. & Ben Biasini, M.D. Memorial Hospital of South Bend 615 North Michigan Street South Bend, Indiana 46601
St. Joseph's Hospital 811 East Madison Street South Bend, Indiana 64622	Family Practice Residency	Norman Holtzman, M.D. St. Joseph's Hospital 811 East Madison Street South Bend, Indiana 64622
Mercy Hospital 701 Tenth Street SE Cedar Rapids, Iowa 52403	Family Practice Residency	Robert Martin, M.D. Mercy Hospital 701 Tenth Street SE Cedar Rapids, Iowa 52403
Broadlawns Polk County Hospital 18th & Hickman Road Des Moines, Iowa 50314	Family Practice Residency	Loran F. Parker, M.D. Broadlawns Polk County Hospital 18th & Hickman Road Des Moines, Iowa 50314
*University of Kansas Medical Center Kansas City, Kansas	Department of Family Practice	Jack D. Walker, M.D. Department of Family Practice 39th and Rainbow Boulevard Kansas City, Kansas 66103
St. Joseph Hospital 3400 Grand Avenue Wichita, Kansas 67278	Family Practice Residency	James M. Donnell, M.D. St. Joseph Hospital 3400 Grand Avenue Wichita, Kansas 67278
Wesley Medical Center 550 North Hillside Wichita, Kansas 67214	Family Practice Residency	G. Gayle Stephens, M.D. Division of Education, Wesley Medical Center 550 North Hillside Wichita, Kansas 67214
Hopkins County Hospital & Trover Clinic 237 Waddill Avenue Madisonville, Kentucky 42431	Family Practice Residency	Dan A. Martin, M.D. Hopkins Co. Hospital & Trover Clinic 237 Waddill Avenue Madisonville, Kentucky 42431
Louisiana State University Affiliated Hospitals Earl K. Long Memorial Hospital 5825 Airline Highway Baton Rouge, Louisiana 70805	Family Practice Residency	Vance Byars, M.D. Earl K. Long Hospital 5825 Airline Highway Baton Rouge, Louisiana 70805
*Franklin Square Hospital Baltimore County, Maryland	Department of Family Practice	William Reichel, M.D. Franklin Square Hospital Family Practice Center 9000 Franklin Square Drive Baltimore, Maryland 21237
University of Maryland School of Medicine 522 West Lombard Street Baltimore, Maryland 21201	Division of Family Practice (University of Maryland School of Medicine)	Edward J. Kowalewski, M.D. University of Maryland School of Medicine Lombard & Green Streets Baltimore, Maryland 21201
Harvard Medical School 83 Francis Street Boston, Massachusetts 02115	Family Health Care Program	Joel J. Alpert, M.D. Harvard University 83 Francis Street Boston, Massachusetts 02115
Oakwood Hospital Dearborn, Michigan	Family Practice Residency	E. M. Wakeman, M.D. Oakwood Hospital 18101 Oakwood Boulevard Dearborn, Michigan

Universities & Hospitals	Program	Program Director or Person in Charge
St. Joseph Hospital 302 Kensington Avenue Flint, Michigan 48502	Family Practice Residency	Louis E. Simoni, M.D. St. Joseph Hospital 302 Kensington Avenue Flint, Michigan 48502
Edward W. Sparrow Hospital 1215 East Michigan Avenue Lansing, Michigan 48902	Family Practice Residency	Harold E. Crow, M.D. Edward W. Sparrow Hospital 1215 East Michigan Avenue Lansing, Michigan 48902
Midland Hospital 4005 Orchard Drive Midland, Michigan 48640	Family Practice Residency Program	Robert E. Bowsher, M.D. The Family Practice Office 4005 Orchard Drive Midland, Michigan 48640
Saginaw Cooperative Hospitals, Inc. 705 Cooper Street Saginaw, Michigan 48602	Family Medicine Residency Program	Roy J. Gerard, M.D. Saginaw Cooperative Hospitals, Inc. 705 Cooper Street Saginaw, Michigan 48602
Hennepin County General Hospital Portland & Fifth Streets, South Minneapolis, Minnesota 55415	Family Practice Residency	Eldon Bergiund, M.D. Hennepin County General Hospital Portland & Fifth Streets, South Minneapolis, Minnesota 55415
University of Minnesota School of Medicine Minneapolis, Minnesota	Department of Family Practice and Community Health	Edward W. Ciriacy, M.D. University of Minnesota Medical School Minneapolis, Minnesota 55455
*St. Paul-Ramsey Hospital and Medical Center St. Paul, Minnesota	Department of Family Practice	Vincent R. Hunt, M.D. St. Paul-Ramsey Hospital and Medical Center University at Jackson St. St. Paul, Minnesota 55101
University of Missouri—Columbia School of Medicine University Medical Center, Stadium Road Columbia, Missouri	Family Practice Residency	A. Sherwood Baker, M.D. School of Medicine University Medical Center, Stadium Rd. Columbia, Missouri
Creighton University School of Medicine Division of Family Practice 3374 S. 13th Street Omaha, Nebraska 68131	Family Practice Residency	Michael Haller, M.D. Creighton Memorial St. Joseph's Hospital 2305 South 10th Street Omaha, Nebraska
University of Nebraska College of Medicine 42nd & Dewey Avenue Omaha, Nebraska 68105	Family Practice Residency	Francis L. Land, M.D. Family Practice Clinic 42nd & Dewey Avenue Omaha, Nebraska 68105
Hunterdon Medical Center Rural Route No. 31 Flemington, New Jersey 08822	Family Practice Residency	Frank C. Snope, M.D. Hunterdon Medical Center Rural Route No. 31 Flemington, New Jersey 08822
Lutheran Medical Center 4520 Fourth Avenue Brooklyn, New York	Family Practice Residency	Eugene Fanta, M.D. Lutheran Medical Center Brooklyn, New York 11220
Deaconess Hospital 1001 Humboldt Parkway Buffalo, New York 14208	Family Practice Residency	Ernest R. Haynes, M.D. The Family Practice Center 840 Humboldt Parkway Buffalo, New York 14211

Universities & Hospitals	Program	Program Director or Person in Charge
Charles S. Wilson Memorial Hospital 33-57 Harrison Street Johnson City, New York 13790	Family Practice Residency	Stanley Erney, M.D. Family Practice Center 33-57 Harrison Street Johnson City, New York 13790
University of Rochester School of Medicine 335 Mount Vernon Street Rochester, New York 14620	Family Medicine Program (Highland Hospital)	Eugene S. Farley, Jr., M.D. Highland Hospital South Avenue at Bellevue Rochester, New York 14620
State University of New York Upstate Medical Center Syracuse, New York 13210	Family Practice Residency	Francis Caliva, M.D. St. Joseph's Hospital 301 Prospect Avenue Syracuse, New York 13210
University of North Carolina School of Medicine Chapel Hill, North Carolina 27514	Family Practice Residency (Moses H. Cone Memorial Hospital, Greensboro)	William Herring, M.D. Associate Professor of Medicine Moses H. Cone Memorial Hospital 1200 North Elm Street Greensboro, North Carolina 27405
Akron City Hospital 525 E. Market Street Akron, Ohio 44309	Family Practice Residency	Edward J. Shahady, M.D. Akron City Hospital 525 E. Market Street Akron, Ohio 44309
Akron General Hospital 400 Wabash Avenue Akron, Ohio 44307	Family Practice Residency	John P. Schlemmer, M.D. Akron General Hospital 400 Wabash Avenue Akron, Ohio 44307
Grant Hospital 309 E. State Street Columbus, Ohio 43215	Family Practice Residency	John P. Stevens, M.D. Grant Hospital 309 E. State Street Columbus, Ohio 43215
*Miami Valley Hospital Dayton, Ohio	Family Practice Residency Program	Raymond K. Bartholomew, M.D. Miami Valley Family Practice Unit One Wyoming Street Dayton, Ohio 45409
St. Elizabeth Medical Center Dayton, Ohio	Family Practice Residency	William A. Stowe, M.D. St. Elizabeth Hospital 601 Miami Boulevard West Dayton, Ohio 45408
Flower Hospital 3350 Collingwood Toledo, Ohio	Family Practice Residency	Franz B. Ruwe, M.D. Flower Hospital 3350 Collingwood Toledo, Ohio 43610
*Mercy Hospital Toledo, Ohio	Family Practice Residency	Atilla M. Yetis, M.D. Family Practice Group Jefferson and 23rd Streets Toledo, Ohio 43624
University of Oklahoma School of Medicine Oklahoma City, Oklahoma 73104	Division of Family Medicine	Roger I. Lienke, M.D. University of Oklahoma Family Medicine Clinic 1600 Phillips Oklahoma City, Oklahoma 73104
University of Oregon Medical School Hospital and Clinic Portland, Oregon	Family Practice Residency	Laurel G. Case, M.D. Division of Family Practice University of Oregon School of Medicine Portland, Oregon

Universities & Hospitals	Program	Program Director or Person in Charge
The Pennsylvania State University College of Medicine The Milton S. Hershey Medical Center Hershey, Pennsylvania 17033	Family Practice Residency	Thomas L. Leaman, M.D. Department of Family Practice The Milton S. Hershey Medical Center Hershey, Pennsylvania 17033
Conemaugh Valley Memorial Hospital 1086 Franklin Street Johnstown, Pennsylvania 15905	Family Practice Residency	Thomas Dugan, M.D. Conemaugh Valley Memorial Hospital 1086 Franklin Street Johnstown, Pennsylvania 15905
Lancaster Hospital 525 North Duke Street Lancaster, Pennsylvania 17604	Family Practice Residency	Nikitas J. Zervanos, M.D. Lancaster General Hospital 525 North Duke Street Lancaster, Pennsylvania 17604
St. Margaret Memorial Hospital 265 46th Street Pittsburgh, Pennsylvania 15201	Family Practice Residency	James A. Ferrante, M.D. St. Margaret Memorial Hospital 265 46th Street Pittsburgh, Pennsylvania 15201
Shadyside Hospital 5230 Centre Avenue Pittsburgh, Pennsylvania 15232	Family Practice Residency	William J. Garner, M.D. 5230 Centre Avenue Pittsburgh, Pennsylvania 15232
*Reading Hospital Reading, Pennsylvania	Family Practice Residency	Arlington A. Nagle, M.D. Reading Hospital 6th & Spruce Reading, Pennsylvania 19602
Washington Hospital 155 Wilson Avenue Washington, Pennsylvania 15301	Family Practice Residency	S. V. Spagnala, M.D. Washington Hospital 155 Wilson Avenue Washington, Pennsylvania 15301
York Hospital 1001 South George York, Pennsylvania 17405	Family Practice Residency	Thomas M. Hart, M.D. 1001 South George York, Pennsylvania 17405
Medical University of South Carolina College of Medicine 80 Barre Street Charleston, South Carolina 29401	Family Practice Residency	Hiram B. Curry, M.D. Medical University of South Carolina College of Medicine 80 Barre Street Charleston, South Carolina 29401
Greenville General Hospital Greenville, South Carolina	Family Practice Residency	E. F. Gaynor, M.D. Greenville General Hospital Greenville, South Carolina
Spartanburg General Hospital 101 East Wood Street, Box 4186 Spartanburg, South Carolina 29303	Family Practice Residency	Robert H. Taylor, M.D. and Warren Lovett, M.D. 101 East Wood Street, Box 4186 Spartanburg, South Carolina 29303
University of Tennessee Memorial Research Center and Hospital 1924 Alcoa Highway Knoxville, Tennessee 37920	Family Practice Residency	Robert F. Lash, M.D. Memorial Research Center and Hospital 1924 Alcoa Highway Knoxville, Tennessee 37920
McLennan County Medical Society P. O. Box 5110 Waco, Texas 76708	Family Practice Residency	Jackson K. Walker, M.D. Providence Hospital 1725 Colcord Avenue Waco, Texas 76703

University of Utah Affiliated Hospitals For Family Practice 50 North Medical Drive Salt Lake City, Utah 84112	Family Practice Residency	John Geyman, M.D. University of Utah College of Medicine Medical Center 50 North Medical Drive Salt Lake City, Utah 84112
McKay-Dee Hospital 3939 Harrison Boulevard Ogden, Utah 84402		George Snell, M.D. McKay-Dee Hospital 3939 Harrison Boulevard Ogden, Utah 84402
St. Benedicts Hospital 3000 Polk Avenue Ogden, Utah 84403		Robert Potts, M.D. St. Benedicts Hospital 3000 Polk Avenue Ogden, Utah 84403
University of Virginia Medical Center Jefferson Park Avenue Charlottesville, Virginia 22901	Family Practice Residency	Richard W. Lindsey, M.D. University of Virginia Medical Center Jefferson Park Avenue Charlottesville, Virginia 22901
Fairfax Hospital 3300 Gallows Road Falls Church, Virginia 22046 (Affiliated—Medical College of Virginia)	Family Practice Residency	Alan Mackintosh, M.D. Family Practice Center Fairfax Hospital 3300 Gallows Road Falls Church, Virginia 22046
Riverside Hospital J. Clyde Morris Boulevard Newport News, Virginia 23601 (Affilidated —Medical College of Virginia)	Family Practice Residency	Edward L. Alexander, Jr., M.D. Family Practice Center Riverside Hospital J. Clyde Morris Boulvard Newport News, Virginia 23601
The Medical College of Virginia The Health Sciences Division of Virginia Commonwealth University Twelfth and Broad Streets Richmond, Virginia 23219	Family Practice Residency	Fitzhugh Mayo, M.D. Department of Family Practice The Medical College of Virginia The Health Sciences Division of Virginia Commonwealth University Twelfth and Broad Streets Richmond, Virginia 23219
Doctors Hospital 909 University Street Seattle, Washington 98101	Family Practice Residency	Joseph Scardapone, M.D. Doctors Hospital 909 University Street Seattle, Washington 98101
Group Health Cooperative of Puget Sound 200 Fifteenth East Seattle, Washington 98102	Residency Training Program for Family Practice	John Quinn, M.D., Chief of Medicine Group Health Cooperative of Puget Sound 200 Fifteenth East Seattle, Washington 98102
University of Washington School of Medicine University Hospital 1959 N. E. Pacific Street Seattle, Washington 98195	Family Practice Residency	T. J. Phillips, M.D. University of Washington School of Medicine University Hospital 1959 N.E. Pacific Street Seattle, Washington 98195
University of Wisconsin School of Medicine 333 North Randall Avenue Madison, Wisconsin 53706	Family Practice Residency	John H. Renner, M.D. University of Wisconsin Medical Center 418 North Randall Avenue Madison, Wisconsin 53706
St. Michael Hospital 2400 West Villard Avenue Milwaukee, Wisconsin 53209	Family Practice Residency	Norbert G. Bauch, M.D. St. Michael Hospital 2400 West Villard Avenue Milwaukee, Wisconsin 53209

*new program

APPENDIX F

SELECTED BIBLOGRAPHY

American Medical Association. *Community Organization for Health Services in Rural Areas.* Chicago: American Medical Association, Coucil on Rural Health.

_____. *Guidelines For Community Health Programs.* Chicago: American Medical Association.

_____. *Health Care Delivery in Rural Areas.* Chicago: American Medical Association, Council on Rural Health, 1969.

_____. *A Physician For Your Community.* Chicago: American Medical Association.

_____. *A Report on Physician Manpower and Medical Education.* Chicago: American Medical Association.

American Medical News. "M.D.'s Assistant in Demand," *American Medical News,* October 25, 1971. p. 7.

Amoss, Harold L., Ph.D. "Community Involvement in Health Planning," *American Medical Association's 21st National Conference on Rural Health,* Seattle, Washington, March 29, 1968.

Andrus, Len Hughes, M.D. "Home Care for Rural Poor," *Hospitals,* 44:43, March 1, 1970.

_____. "How Do We Get Top Notch Care to The Crossroads?" *Medical Care,* 8:350, September-October, 1970.

Anzel, Daniel M. "The Need for Centralizing Local Health Care Services", *Medical Care,* 8:414, September-October, 1970.

Bible, Bond L., Ph.D. "Physicians' Views of Medical Practice in Nonmetropolitan Communities", *Public Health Reports,* 85:11, January, 1970.

Bodenheimer, Thomas S. "Mobile Units: A Solution to the Rural Health Problem?" *Medical Care,* 7:144, March-April, 1969.

Castleton, K. B. "The Present Dilemma of Rural Health Services," *Rocky Mountain Medical Journal,* 67:29, January, 1970.

Chamberlin, R. T. "The Organization of Rural Health Services", *Journal of the Maine Medical Association,* 61:27, February, 1970.

Committee on Physicians Shortage in Rural North Carolina. *Physician Shortage in Rural North Carolina.* Raleigh: Legislative Research Commission of the North Carolina General Assembly, 1969.

Comprehensive Health Planning, Virginia Office. *Report on Health Services for Rural Virginians.* Richmond: Comprehensive Health Planning, Virginia State Health Department, 1970.

Curtis, E. "Some Social Aspects of Medical Care in Small Communities," *Canadian Journal of Public Health,* 62:6, January-February, 1971.

Fahs, Ivan J. and Oster L. Peterson. "Towns Without Physicians and

Towns with Only One—A Study of Four States in the Upper Midwest, 1965," *American Journal of Public Health*, 58:1200 July, 1968.

Gingras, R. "The Practice of Paramedical Professions in Under-Populated Regions," *Transactions and Studies of the College of Physicians of Philadelphia*, 37:191, January, 1970.

Harrell, G. T. "Rural and Small Town Practice. Future Training and Role of the Family Physician," *Journal of the American Medical Association*, 209:399, July 21, 1969.

Hospitals. "Nurse Practitioners," *Hospitals*, 44:57, May 1, 1970.

_____. "The Physician's Assistant," *Hospitals*, 45:42, June, 1971.

Lantz, R. J. "Role of the Community in Developing Improved Health Care," *Bulletin of the New York Academy of Medicine*, 46:1028, December, 1970.

McNerney, Walter J. and Donald C. Riedel. *Regionalization and Rural Health Care*. Ann Arbor: University of Michigan Press, 1962.

Medical World News. "Are More Doctors the Only Answer to Rural Health Care?", *Medical World News*, 12:29, May 28, 1871.

Myers, S. "The Physician's Assistant in the Community Hospital and in Office Practice," *Annals of the New York Academy of Science*, 166:911, December 31, 1969.

National Commission on Community Health Services, Report of the Task Force on Organization of Community Health Services. *Health Administration and Organization in the Decade Ahead*. Washington: Public Affairs Press, 1967.

_____. *Health is a Community Affair*. Washington: Public Affairs Press, 1967.

Parker, R. C. and T. G. Tuxill. "The Attitudes of Physicians Toward Small Town Practice," *Journal of Medical Education*, 42:327, April, 1967.

Parker, R. C. et al. "Social, Economic and Demographic Factors Affecting Physician Population in Upstate New York," *New York Journal of Medicine*, 69:760, March 1, 1969.

Saltzman, B. N. "Comprehensive Health Planning for Rural Areas," *Journal of the Tennessee Medical Association*, 62:622, July, 1969.

Sanazaro, Paul J., M.D. "Physician Support Personnel in the 1970's," *Journal of the American Medical Association*, 214:98, October 5, 1970.

Wilson, Vernon E., M.D. "Rural Health Care Systems," *Journal of the American Medical Association*, 216:1623, June, 1971.